

A Drinking Water Standard for MTBE?

The Ifs and Whens of Establishing an MCL

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The Long and Winding Road

Many steps are involved in establishing a drinking water standard or maximum contaminant level (MCL). Drinking water standards are regulations that the U.S. Environmental Agency (EPA) sets to control the level of contaminants in the nation's drinking water. The Safe Drinking Water Act (SDWA) identifies several factors that affect the level at which an MCL is set: known or anticipated adverse human health effects, the ability of various technologies to remove the contaminant, their effectiveness, and cost of treatment. All MCLs are set at levels that protect public health. The process of establishing an MCL for a given contaminant from start to finish can take 10 years or longer.

Step number one in developing a regulation is to identify drinking water problems. Currently, there are thousands of contaminants that could affect drinking water quality. Priority contaminants are selected carefully with an eye toward ensuring that expenditures for drinking water protection are effective at the federal, state, and local levels.

If EPA determines that a contaminant poses a threat to human health, it is placed on the Agency's Contaminant Candidate List (CCL). Once placed on this list, these contaminants become the focus EPA's drinking water program over a period of years. EPA receives advice on which contaminants to include on the CCL from scientific advisory panels such as the Science Advisory Board (SAB), the National Drinking Water Advisory Council (NDWAC), and the public. Contaminants on the CCL are divided into three categories: contaminants ready for regulatory determinations, those requiring additional research, and those for which more occurrence data is needed.

The SDWA mandates that EPA make regulatory determinations based on three factors:

1. Risk that a contaminant may pose to human health,
2. The frequency at which a contaminant of concern occurs in drinking water supplies, and
3. The "meaningful" opportunity for health risk reduction achieved through regulation of the contaminant.

Once the contaminants have been selected and categorized on the CCL, the SDWA requires EPA to select five or more contaminants from the regulatory determination priorities category and, by 2001, determine whether or not to regulate them.

If EPA determines that a regulation is necessary, the agency has three and a half years to issue a final regulation. The first CCL was published in February 1998, meaning that the first regulations to result from that list will be published in February 2005. The CCL and the decision to regulate operate on a five-year cycle; any contaminant that is not chosen in this round will not be regulated until 2010.

If EPA feels it does not have the information to make a regulatory determination for a contaminant on the CCL, then it is listed under the occurrence and research priority lists. The research priority list is designed to address additional information needed on health, treatment technologies, and analytical methods for the contaminant. The occurrence priority list addresses occurrence data gaps for that contaminant.

The MTBE Timeline

So how does this MCL process relate to MTBE? MTBE was placed on the February 1998 CCL with the indication that further health effects, occurrence, and treatment technique information was needed before a regulatory determination could be made. Since then, EPA has determined that suitable treatment technologies exist; however, more health effects and occurrence information are still needed.

EPA will gather occurrence information through the Unregulated Contaminant Monitoring Rule (UCMR), a vehicle for assisting the agency in obtaining national occurrence information for MTBE, beginning in 2001. EPA is also awaiting the completion of ongoing health effects studies.

Inasmuch as EPA does not expect to have this information for MTBE by 2001, when the agency makes its first round of regulatory determinations on contaminants on the CCL, a regulatory determination for MTBE could not be made until 2006. Keep in mind, however, this depends on whether EPA decides there is enough information for MTBE to move into the regulatory determinations category. If a regulatory determination is made, EPA will need approximately three and a half years for rule development. Thus, the earliest EPA would have a regulation for MTBE is 2010.

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